

AN11240

Pegoda RD710 Implementation of the USB driver

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Application note
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Document information

Info	Content
Keywords	Windows smartcard driver, RD710
Abstract	How to build Windows driver for Pegoda evaluation kit EV710 using Windows WDK 7.10



Revision history

Rev	Date	Description
1.0	20120709	First released version

Contact information

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For sales office addresses, please send an email to: salesaddresses@nxp.com

1. Introduction

This short manual is intended for users that wish to build NXP Pegoda driver from source code. The process requires basic understanding of operation system, installing new applications and running commands from console. URL addresses, files and paths in manual are in italic, commands to be typed in console are in bold italic.

2. Building NXP Pegoda driver from source

1.1 Installing Windows Development Kit

Download Windows Development Kit (WDK) 7.1.0 from Microsoft Download Center:

<http://www.nxp.com/redirect/microsoft.com/whdc/devtools/wdk/wdkpkg.mspix>

Burn downloaded ISO image to CD or use CD emulation SW (like *Daemon Tools*) to install WDK to hard drive.

Make sure to also install source examples.

1.2 Applying driver patch

Download GNU patch utility from:

<http://gnuwin32.sourceforge.net/packages/patch.htm>

(Choose Setup link: <http://gnuwin32.sourceforge.net/downlinks/patch.php>)

Install GNU patch to default proposed path (*C:\Program Files\GnuWin32*).

Copy latest driver patch named ***pegoda2_driver_patch_<yyyymmdd>***.

from Pegoda CD

to *C:\WinDDK\7600.16385.1\src\smartcrd* using Windows Explorer or console command.

Open console and navigate to smartcrd folder. Type:

```
cd WinDDK\7600.16385.1\src\smartcrd
```

Apply patch. Type in console:

```
"C:\Program Files\GnuWin32\bin\patch.exe" -p0 <pegoda2_driver_patch_<yyyymmdd>
```

1.3 Building driver for 32-bit Windows XP

From Windows Start menu choose

Programs

Windows Driver Kits

WDK 7600.16385.1

Build Environments

Windows XP/x86 Free Build Environment

New console window will open in *C:\WinDDK\7600.16385.1* folder.

Navigate to source directory. Type in console:

```
cd src\smartcrd
```

Build driver. Type in console:

```
BLD
```

As a result following driver files (among others) will be created in output directory
C:\WinDDK\7600.16385.1\src\smartcrd\pscrlobjfre_wxp_x86\i386

scrxppegoda.inf

scrxppegoda.sys

WdfCoInstaller01009.dll

Drivers for other build environments are built in similar way (choose different build environment).

- Driver built for 32-bit Windows XP can also be used for other 32-bit Windows systems.
- Driver built for 64-bit Windows Vista can also be used for other 64-bit Windows systems.

3. References

- [1] MFRC523 Contactless reader IC, available on NXP web, Doc.-Id.: 1152**¹⁾,
- [2] MF1ICS50 MIFARE 1K Data Sheet, available on NXP web, Doc.-Id.: 0010**
- [3] MF1ICS70 MIFARE 4K Data Sheet, available on NXP web, Doc.-Id.: 0435**
- [4] MF0ICU2 MIFARE Ultralight C Data Sheet, available on NXP web, Doc.-Id.: 1714**
- [5] MF0ICU1MIFARE Ultralight Data Sheet, available on NXP web, Doc.-Id.: 0286**
- [6] MF1PLUSx0y1 MIFARE Plus X Short Data Sheet, available on NXP web, Doc.-Id.: 1635**
- [7] MF1SPLUSx0y1 MIFARE Plus S Short Data Sheet, available on NXP web, Doc.-Id.: 1870**
- [8] MF3ICD21, MF3ICD41, MF3ICD81 MIFARE DESFire EV1 Short Datasheet, available on NXP web, Doc.-Id.: 1456**
- [9] P5DF072EV2/T0PD4090 MIFARE SAM AV1 short data sheet, available on NXP web, Doc.-Id.: 1897**
- [10] P5DF081 MIFARE SAM AV2 short data sheet, available on NXP web, Doc.-Id.: 1917**
- [11] Application Note: Example Project Pegoda
- [12] Application Note: Hardware Design Guide Pegoda
- [13] Application Note: Quick Start Up Guide Pegoda
- [14] Application Note: Software Design Guide Pegoda
- [15] Application Note: Pegoda Toolchain Information
- [16] Application Note: Pegoda Amplifier
- [17] Application Note: Pegoda RD710 Implementation of the USB driver
- [18] Application Note: Symmetric key diversifications, available on NXP web
- [19] Application Note: MIFARE SAM AV2 Documentation and Sampling, available on NXP web
- [20] Software: MIFARE discover, available over BL-ID docu control, Doc.-Id.: 1866**
- [21] Software: NXP Reader library including Sample Projects, available over BL-ID docu control: Doc.-Id.: 2003**
- [22] Software: TestWinScard, available on NXP web

¹⁾ ... BU-ID document version number

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